

=> FILE REG

FILE 'REGISTRY' ENTERED AT 10:27:14 ON 07 AUG 2007  
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=> D HIS

FILE 'HCAPLUS' ENTERED AT 09:47:22 ON 07 AUG 2007

L1 59517 S SASAKI ?/AU  
L2 90180 S YAMADA ?/AU  
L3 199 S MAESAWA ?/AU  
L4 103345 S ITO ?/AU  
L5 7191 S MUTO ?/AU  
L6 1 S L1 AND L2 AND L3 AND L4 AND L5  
SEL RN

FILE 'REGISTRY' ENTERED AT 09:48:28 ON 07 AUG 2007

L7 6 S E1-E6  
E 2-PROPENOIC ACID, 2-METHYL-, OCTAHYDRO-4,7-METHANO-1H-I  
L8 1 S E3  
E DEUTERIUM/CN  
L9 1 S E3  
E DEUTERIUM OXIDE/CN  
L10 2 S E3

FILE 'HCA' ENTERED AT 09:57:10 ON 07 AUG 2007

L11 2 S (L8/D OR L8/DP) (L) DEUTER?  
L12 71 S L8  
L13 109948 S L9 OR D2  
L14 47591 S L10 OR D2O OR DEUTERIUM#(W)OXIDE# OR (HEAVY OR DEUTERAT  
L15 QUE DEUTER?  
L16 2 S L12 AND (L13 OR L14 OR L15)

FILE 'LREGISTRY' ENTERED AT 09:58:12 ON 07 AUG 2007

L17 STR

FILE 'REGISTRY' ENTERED AT 10:06:55 ON 07 AUG 2007

L18 38 S L17  
L19 SCR 1839 AND 1312  
L20 50 S L17 AND L19  
L21 20285 S L17 AND L19 FUL  
SAV TEM L21 RED535/A  
L22 30 S L21 AND D/ELS  
L23 3 S L21 AND T/ELS  
SEL L23 1 RN  
L24 1 S E1

FILE 'HCA' ENTERED AT 10:14:10 ON 07 AUG 2007

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L25      1 S L24
L26      14 S L22
L27      5 S (L21/D OR L21/DP) (L) DEUTER?
L28      10960 S L21
L29      72 S L28 AND (L13 OR L14 OR L15)
L30      993 S L21/D OR L21/DP
L31      21 S L30 AND (L13 OR L14 OR L15)

L32      8126 S L9 (L) RACT/RL
L33      1892 S L10 (L) RACT/RL
L34      2 S L28 AND (L32 OR L33)
L35      12442 S L9 (L) (REACT? OR RX# OR RXN#)
L36      1047 S L10 (L) (REACT? OR RX# OR RXN#)
L37      2 S L28 AND (L35 OR L36)
L38      6464 S L21/P
L39      44 S L29 AND L38
L40      57770 S L9
L41      10274 S L10
L42      6 S L29 AND (L40 OR L41)
L43      11 S L11 OR L16 OR L25 OR L27 OR L34 OR L37 OR L42
L44      12 S L26 NOT L43
L45      16 S L31 NOT (L43 OR L44)

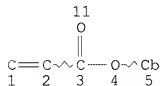
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FILE 'REGISTRY' ENTERED AT 10:27:14 ON 07 AUG 2007

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=> D L21 QUE STAT
L17      STR

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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS PCY AT 5
DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

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STEREO ATTRIBUTES: NONE
L19      SCR 1839 AND 1312

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L21 20285 SEA FILE=REGISTRY SSS FUL L17 AND L19

100.0% PROCESSED 609273 ITERATIONS  
SEARCH TIME: 00.00.07

20285 ANSWERS

=> FILE HCA  
FILE 'HCA' ENTERED AT 10:27:40 ON 07 AUG 2007  
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=> D L43 1-11 CBIB ABS HITSTR HITIND

L43 ANSWER 1 OF 11 HCA COPYRIGHT 2007 ACS on STN

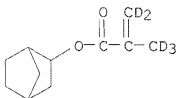
146:326268 Top barrier coating materials for immersion lithography and beyond. Hata, Mitsuhiro; Yoon, Jin-Young; Hah, Jung-Hwan; Ryoo, Man-Hyoung; Choi, Sang-Jun; Cho, Han-Ku (Process Development Team, Semiconductor R&D Center, Samsung Electronics Co., Ltd., Gyeonggi-Do, 449-711, S. Korea). Proceedings of SPIE-The International Society for Optical Engineering, 6153(Pt. 1, Advances in Resist Technology and Processing XXIII), 61531Y/1-61531Y/8 (English) 2006. CODEN: PSISDG. ISSN: 0277-786X. Publisher: SPIE-The International Society for Optical Engineering.

AB Immersion barrier coats were formulated and evaluated on ArF photoresist in view of interaction between photoresist and top coats. Acrylate polymers having an acid-labile protecting group, an acid group, and a polar group were synthesized to realize water barrier property and developability. To compensate the insufficient developability, thermal acid generator was included as an additive that can enhance the developability of the acrylate top coats by post exposure bake. In the course of the material evaluation, it became evident that carboxyl acid group in the top coat base polymers has great influence on photoresist profiles, and this result was feedback to a new acid group, **deuterated** carboxyl acid, that is suitable for both ArF wavelength and extreme-UV (EUV) wavelength. When top coat materials having **deuterated** carboxyl acid were applied on ArF photoresist, fine pattern profiles were confirmed. Further, an extension of barrier coating concept to EUV lithog. as outgas barrier coats was examd. on an EUV photoresists test sample. These outgas barrier coat materials do not include fluorine atoms, therefore, achieves good transparency at EUV wavelength.

IT 7789-20-0D, Water-d2, **reaction** product  
with alkene-maleic anhydride copolymer 929035-16-5,

- IT 811-98-3D, Methan-d3-ol-d, reaction product with alkene-maleic anhydride copolymer 925-93-9D, Ethanol-d1, reaction product with alkene-maleic anhydride copolymer **7789-20-0D**, Water-d2, reaction product with alkene-maleic anhydride copolymer 9011-16-9D, reaction product with methanol-d4 or **D2O** 25266-02-8D, reaction product with methanol-d4 and ethanol-d1 26298-63-5D, reaction product with methanol-d4 26587-32-6D, reaction product with methanol-d4 and ethanol-d1 26702-38-5D, reaction product with methanol-d4 26711-22-8D, reaction product with methanol-d4 31473-53-7D, reaction product with methanol-d4 and ethanol-d1 51176-40-0D, reaction product with methanol-d4 146786-73-4D, reaction product with methanol-d4 **929035-16-5**, Acrylic acid-2-ethyl-2-adamantyl acrylate-hydroxypropyl acrylate copolymer 929035-17-6D, reaction product with methanol-d4 929035-18-7D, reaction product with methanol-d4 929035-19-8D, reaction product with methanol-d4 929035-20-1D, reaction product with methanol-d4 (immersion barrier coating; polymers contg. acid-labile groups for use as photoresist top-coats in ArF laser immersion lithog. and as outgass barrier coatings in extreme-UV lithog.)
- IT **7782-39-0**, Deuterium, properties (isotope effect; polymers contg. **deuterated** carboxyl groups for use as photoresist top-coats in ArF laser immersion lithog. and as outgass barrier coatings in extreme-UV lithog.)
- L43 ~~ANSWER 2 OF 11 HCA COPYRIGHT 2007 ACS ON STN~~
- 143:153104 Preparation of **deuterated** norborneol, dinorbornyl ether, and unsaturated carboxylic acid norbornyl esters. Kaneko, Yushi; Ito, Takayuki; Sato, Tadahisa (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2005200363 A 20050728, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2004-8991 20040116.
- AB Title compds. are prepd. by **deuteration** of 2-norbornene (I) in **D2O** in the presence of acids having  $pK_a \leq 1$  and optional esterification with R2CR3:CR1CO2H (R1-R3 = H, D, **deuterated** alkyl) in the presence of acid catalysts and polymn. inhibitors. The **deuterated** esters may be useful as materials for optical materials, e.g. optical fibers with low transmission losses. Thus, I was autoclaved with **D2O** and methanesulfonic anhydride in heptane, the aq. phase removed, concd., and esterified with D2C:C(CD3)CO2H in the presence of Amberlyst and Irganox for 8 h to give 46% (based on I) **deuterated** norbornyl methacrylate. The **deuteration** rate of I was 89%.
- IT **117205-77-3P** (**deuteration** of norbornene in presence of acids in prepn. of materials for optical fibers with low transmission losses)
- RN 117205-77-3 HCA

CN 2-Propenoic-3,3-d2 acid, 2-(methyl-d3)-, bicyclo[2.2.1]hept-2-yl ester (9CI) (CA INDEX NAME)



IT 7789-20-0, **Heavy water**  
(**deuteration** of norbornene in presence of acids in  
prepn. of materials for optical fibers with low transmission  
losses)

RN 7789-20-0 HCA

CN Water-d2 (CA INDEX NAME)

D-O-D

IC ICM C07B059-00  
ICS C07C027-00; C07C029-04; C07C035-30; C07C041-09; C07C043-18;  
C07C067-08; C07C067-24; C07C069-54; C07B061-00; C07M005-00

CC 24-7 (Alicyclic Compounds)  
Section cross-reference(s): 35, 73

ST optical fiber material **deuterated** norbornyl methacrylate  
prepn; **deuteration** norbornene **heavy**  
**water** methanesulfonic acid; norborneol dinorbornyl ether  
**deuterated** prepn; norbornyl unsatd carboxylate prepn  
material optical fiber

IT **Deuteration**  
Optical fibers  
(**deuteration** of norbornene in presence of acids in  
prepn. of materials for optical fibers with low transmission  
losses)

IT Acids, uses  
Sulfonic acids, uses  
(**deuteration** of norbornene in presence of acids in  
prepn. of materials for optical fibers with low transmission  
losses)

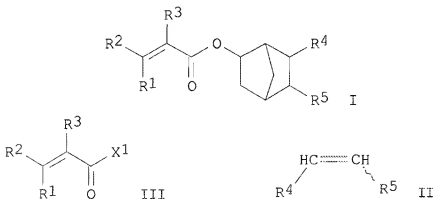
IT 53127-80-3P 860478-19-9P, Bicyclo[2.2.1]heptan-2-ol-d  
(**deuteration** of norbornene in presence of acids in  
prepn. of materials for optical fibers with low transmission  
losses)

IT 117205-77-3P  
(**deuteration** of norbornene in presence of acids in  
prepn. of materials for optical fibers with low transmission

- losses)
- IT 7143-01-3, Methanesulfonic anhydride 13813-19-9, Sulfuric acid-  
**d2** 66178-40-3, Methanesulfonic acid-d  
 (deuteration of norbornene in presence of acids in  
 prepn. of materials for optical fibers with low transmission  
 losses)
- IT 498-66-8, 2-Norbornene **7789-20-0, Heavy**  
**water**  
 (deuteration of norbornene in presence of acids in  
 prepn. of materials for optical fibers with low transmission  
 losses)

L43 ANSWER 3 OF 11 HCA COPYRIGHT 2007 ACS on STN  
 142:199584 Unsaturated esters having **deuterated** alicyclic  
 groups, their preparation, polymers, and optical instruments  
 therewith. Kyoda, Hirokazu; Sasaki, Hiroki; Yamada, Kozaburo (Fuji  
 Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2005042041  
 A 20050217, 32 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
 2003-278949 20030724.

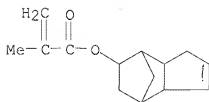
GI



- AB The esters, represented by I (R<sup>1</sup>-R<sup>3</sup> = H, D, halo, Me, CD<sub>3</sub>, CF<sub>3</sub>; R<sup>4</sup>, R<sup>5</sup> = H, F, substituent; ≥55% of H in the alicyclic group are **deuterated**), are prepd. by process including **deuteration** of pentadiene in **deuterated water** in the presence of Cl to form intermediates, which may be followed by Diels-Alder reaction with II (R<sup>4</sup>, R<sup>5</sup> = the same as above), hydration, and esterification with III (R<sup>1</sup>-R<sup>3</sup> = the same as above; X<sup>1</sup> = Cl, Br, OH, OD). Monomer compns. contg. the esters, their polymd. products, and optical instruments comprising the same

are further claimed. Thus, dicyclopentadiene was cracked, **deuterated** in D<sub>2</sub>O in the presence of NaOD to degree of **deuteration** 96%, dimerized, reacted with H<sub>2</sub>SO<sub>4</sub> in D<sub>2</sub>O, hydrogenated, and reacted with methacrylic acid-d<sub>5</sub> in the presence of polymn. inhibitor to give **deuterated** tricyclodecanyl methacrylate (IV) in 52% yield. Then, 2 parts IV was mixed with 8 parts Me methacrylate-d<sub>8</sub> and dimethyl-2,2'-azobis(2-methylpropionate), and rotationally polymd. on the inner wall of PVC pipe at 90° to give a tube, which was filled with the same monomer mixt. contg. 10% **deuterated** bromobenzene, subjected to polymn., and drawn to give a 300-μ-diam. fiber without bubbles and showing transmission loss 98 dB/km at 650 nm and 150 dB/km at 850 nm, resp.

- IT **34759-34-7DP**, Tricyclodecanyl methacrylate, **deuterated**, polymers with Me methacrylate-d<sub>8</sub> (intermediates; unsatd. esters having **deuterated** alicyclic groups and forming low-loss plastic optical fibers)
- RN 34759-34-7 HCA
- CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester (CA INDEX NAME)

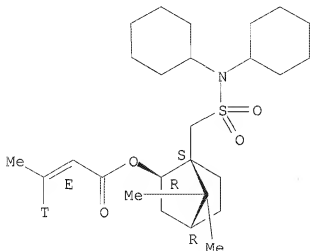


- IC ICM C08F020-16
- ICS C07C013-15; C07C067-08; C07C069-54; G02B006-00; C07B059-00; C07M005-00
- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 35, 73
- ST **deuterated** alicyclic ester optical instrument polymer;  
tricyclodecanyl methacrylate **deuterated** polymeric fiber  
low loss; methacrylic fiber **deuterated** tricyclodecanyl  
contg low loss
- IT Optical fibers  
(polymeric; unsatd. esters having **deuterated** alicyclic groups and forming low-loss plastic optical fibers)
- IT Optical instruments  
(unsatd. esters having **deuterated** alicyclic groups and forming low-loss plastic optical fibers)
- IT 35233-69-3DP, Methyl methacrylate-d<sub>8</sub>, polymers with **deuterated** tricyclodecanyl methacrylate (fiber; unsatd. esters having **deuterated** alicyclic groups and forming low-loss plastic optical fibers)

- IT 542-92-7DP, Cyclopentadiene, **deuterated**, dimerized, reaction products with sulfuric acid 27137-33-3P  
**34759-34-7DP**, Tricyclodecanyl methacrylate, **deuterated**, polymers with Me methacrylate-d8  
107282-83-7DP, Tricyclodecanol, **deuterated**  
(intermediates; unsatd. esters having **deuterated**  
alicyclic groups and forming low-loss plastic optical fibers)
- IT 77-73-6, Dicyclopentadiene 55935-44-9  
(unsatd. esters having **deuterated** alicyclic groups and  
forming low-loss plastic optical fibers)
- L43 ANSWER 4 OF 11 HCA COPYRIGHT 2007 ACS on STN
- 142:156518 Manufacture of **deuterated** (meth)acrylates, polymers thereof and optical members. Sasaki, Hiroki; Yamada, Kohzaburoh; Maesawa, Tsuneaki; Ito, Nobuhiro; Muto, Kazushige (Fuji Photo Film Co., Ltd., Japan; Wako Pure Chemical Industries, Ltd.). PCT Int. Appl. WO 2005010060 A1 20050203, 39 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2004-JP10868 20040723. PRIORITY: JP 2003-278950 20030724.
- AB A novel compd. represented by a formula, (R1)(R2)C:C(R3)(C:O)OR4, wherein R1, R2 = heavy or light hydrogen, R3 = heavy or light hydrogen or Me in which three hydrogen atoms are resp. heavy or light hydrogen atoms, R4 = condensed ring group composed of a norbornane ring and a C5-7 hydrocarbon ring provided that at least one hydrogen atom contained in the condensed ring group is a heavy hydrogen atom; and a novel polymer produced by polymn. of a compn. comprising the compd. are disclosed.
- IT **34759-34-7DP**, **deuterated**, polymers  
(manuf. of **deuterated** (meth)acrylates, polymers thereof  
and optical members)
- RN 34759-34-7 HCA
- CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester (CA INDEX NAME)



Double bond geometry as shown.



CC 10-2 (Microbial, Algal, and Fungal Biochemistry)  
 IT **155109-61-8P** 155109-62-9P 155109-63-0P 155109-64-1P  
 155109-65-2P  
 (prepn. and reaction of, in tritiated alloisoleucine prepn.)

L43 ANSWER 9 OF 11 HCA COPYRIGHT 2007 ACS on STN

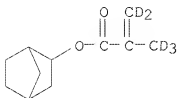
109:191037 Preparation of deuterated (meth)acrylate esters. Wegener, Peter; Heumüller, Rudolf (Hoechst A.-G., Fed. Rep. Ger.). Ger. Offen. DE 3639117 A1 19880519, 6 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1986-3639117 19861115.

AB R1R2C:CR3CO2R4 [R1, R2 = H, D; R3 = H, D, Me, CH2D, CHD2, CD3; R4 = C(Me)2CN, bicycloheptyl, tricycloheptyl, perfluoroalkyl or their deuterated derivs.] are prepd. for use in the manuf. of transparent polymers with low loss in light transmission and glass temps. higher than that of PMMA. The reaction of CD2:C(CD3)COCl with HOC(CD3)2CN in tert-BuOMe contg. Et3N gave the perdeutero ester (I). Heating 5 mL I with 50 mg dilauroyl peroxide at 50° for 20 h and 90° for 2 h gave a glass-clear polymer with glass temp. 117° and decompn. temp. 220°.

IT **117205-77-3DP**, 2-Norbornyl perdeuteromethacrylate, deutero derivs., polymers  
 (transparent, with high glass temp., manuf. of)

RN 117205-77-3 HCA

CN 2-Propenoic-3,3-d2 acid, 2-(methyl-d3)-, bicyclo[2.2.1]hept-2-yl ester (9CI) (CA INDEX NAME)



- IC ICM C07C069-54  
ICS C07C121-38; C07C069-653; C08F020-10; G02B001-04
- CC 35-2 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 23, 24
- IT 106369-59-9P, 2-Norbornyl methacrylate polymer 117116-38-8P,  
2-Cyanoisopropylmethacrylate polymer 117116-40-2P,  
Hexadeutero-2-cyano-isopropylpentadeuteromethacrylate polymer  
117116-42-4P 117116-44-6P, 2-Deutero-1,1,1,3,3,3-  
hexafluoroisopropylpentadeuteromethacrylate polymer 117116-46-8P,  
Heptafluoroisopropylperdeuteromethacrylate polymer  
**117205-77-3DP**, 2-Norbornyl perdeuteromethacrylate,  
**deutero** derivs., polymers  
(transparent, with high glass temp., manuf. of)
- L43 ANSWER 10 OF 11 HCA COPYRIGHT 2007 ACS on STN  
104:35119 Optical fibers with low optical transmission loss. (Sumitomo  
Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 60125807 A  
19850705 Showa, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1983-234860 19831212.
- AB Heat-resistant, moisture-resistant optical fibers are prep'd. by melt  
spinning together a deuterated Me methacrylate copolymer contg. >5  
wt.% methacrylic acid unit contg. C8-20 alicyclic hydrocarbon groups  
as core and a transparent polymer having lower refractive index as  
sheath. Thus, a mixt. contg. bornyl methacrylate 25, deuterated Me  
methacrylate 72, and Me acrylate 3% was polyimd. to give a copolymer  
(I) with refractive index (n) 1.49. I as core and 20:5:75 maleic  
anhydride-Me acrylate-2-(trifluoromethyl)-3,3,3-trifluoropropyl  
methacrylate copolymer [98854-37-6] (n 1.40) as sheath were melt  
spun together at 90:10 ratio to give optical fibers with good  
heat-resistance and good moisture-resistance properties and low  
optical transmission loss.
- IT **4647-84-1D**, polymer with **deuterated** Me  
methacrylate and Me acrylate **86336-55-2D**, polymer with  
**deuterated** Me methacrylate and Me acrylate  
(fiber, core with fluoropolymer sheath, for fiber optics)
- RN 4647-84-1 HCA
- CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl  
ester, endo- (9CI) (CA INDEX NAME)

=> FILE REG  
FILE 'REGISTRY' ENTERED AT 11:23:13 ON 10 AUG 2007  
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FILE 'REGISTRY' ENTERED AT 11:04:06 ON 10 AUG 2007  
ACT RED535/A

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L1 STR  
L2 SCR 1839 AND 1312  
L3 20285 SEA FILE=REGISTRY SSS FUL L1 AND L2  
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FILE 'LREGISTRY' ENTERED AT 11:04:21 ON 10 AUG 2007  
L4 STR L1

FILE 'REGISTRY' ENTERED AT 11:07:42 ON 10 AUG 2007  
L5 SCR 1028  
L6 24 S L4 AND L5 SSS SAM SUB=L3

FILE 'LREGISTRY' ENTERED AT 11:09:08 ON 10 AUG 2007  
L7 STR

FILE 'REGISTRY' ENTERED AT 11:11:41 ON 10 AUG 2007  
L8 2 S L7 SSS SAM SUB=L3  
L9 69 S L7 SSS FUL SUB=L3  
SAV L9 RED535A/A  
L10 25 S L9 AND PMS/CI  
L11 44 S L9 NOT L10

FILE 'HCA' ENTERED AT 11:14:11 ON 10 AUG 2007  
L12 17 S L10  
L13 25 S L11  
L14 950827 S OPTIC?  
L15 54330 S SASAKI ?/AU  
L16 82489 S YAMADA ?/AU  
L17 181 S MAESAWA ?/AU  
L18 93639 S ITO ?/AU  
L19 6566 S MUTO ?/AU  
L20 1 S L15 AND L16 AND L17 AND L18 AND L19  
L21 179565 S TRANSPAREN?  
L22 1 S L12 AND (L14 OR L21)  
L23 3 S L13 AND (L14 OR L21)  
L24 1239702 S ABSORB? OR ABSORP?

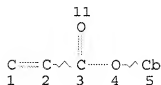
L25 3 S L12 AND L24  
 L26 1 S L13 AND L24  
 L27 7 S L22 OR L23 OR L25 OR L26

FILE 'REGISTRY' ENTERED AT 11:17:09 ON 10 AUG 2007  
 L28 408 S L4 AND L5 SSS FUL SUB=L3  
 SAV L28 RED535B/A

FILE 'HCA' ENTERED AT 11:18:01 ON 10 AUG 2007  
 L29 273 S L28  
 L30 57 S L29 AND (L14 OR L21 OR L24)  
 L31 41 S L29 AND L14  
 L32 16 S L29 AND L21  
 L33 9 S L29 AND L24  
 L34 5 S L31 AND L32  
 L35 3 S L31 AND L33  
 L36 2 S L32 AND L33  
 L37 8 S L34 OR L35 OR L36  
 L38 23 S L32 OR L33  
 L39 7 S 1840-2003/PY,PRY AND L27  
 L40 8 S L37 NOT L39  
 L41 6 S 1840-2003/PY,PRY AND L40  
 L42 15 S L38 NOT (L39 OR L41)  
 L43 11 S 1840-2003/PY,PRY AND L42  
 L44 36 S L31 NOT (L39 OR L41 OR L43)  
 L45 28 S 1840-2003/PY,PRY AND L44

FILE 'REGISTRY' ENTERED AT 11:23:13 ON 10 AUG 2007

=> D L9 QUE STAT  
 L1 STR



NODE ATTRIBUTES:  
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 GGCAT IS PCY AT 5  
 DEFAULT ECLEVEL IS LIMITED

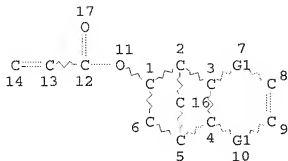
GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L2 SCR 1839 AND 1312

L3 20285 SEA FILE=REGISTRY SSS FUL L1 AND L2

L7 STR



REP G1=(0-4) C

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

L9 69 SEA FILE=REGISTRY SUB=L3 SSS FUL L7

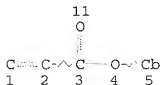
100.0% PROCESSED 12328 ITERATIONS

69 ANSWERS

SEARCH TIME: 00.00.01

=&gt; D L28 QUE STAT

L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS PCY AT 5

DEFAULT ECLEVEL IS LIMITED

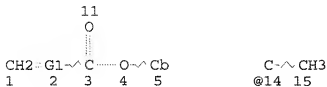
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L2 SCR 1839 AND 1312  
L3 20285 SEA FILE=REGISTRY SSS FUL L1 AND L2  
L4 STR



VAR G1=CH/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS PCY UNS AT 5

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L5 SCR 1028

L28 408 SEA FILE=REGISTRY SUB=L3 SSS FUL L4 AND L5

100.0% PROCESSED 18128 ITERATIONS

408 ANSWERS

SEARCH TIME: 00.00.01

=> FILE HCA

FILE 'HCA' ENTERED AT 11:23:48 ON 10 AUG 2007

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=> D L39 1-7 CBIB ABS HITSTR HITIND

L39 ANSWER 1 OF 7 HCA COPYRIGHT 2007 ACS on STN

140:383119 Chemically amplified positive resist compositions showing stable post-exposure and -coating delay. Sato, Kenichiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004138663 A 20040513, 68 pp. (Japanese). CODEN: JKXXAP. APPLICATION: JP 2002-300750 20021015.



IC C08L067-00

CC 36-3 (Plastics Manufacture and Processing)

IT 64665-07-2 64719-04-6 64719-13-7 64719-14-8

64719-16-0 64719-17-1

(crosslinked, as coatings and moldings with improved chem. and mech. properties)

IT 28347-17-3P 29725-36-8P

(prepn. of)

L39 ANSWER 7 OF 7 HCA COPYRIGHT 2007 ACS on STN

65:48198 Original Reference No. 65:9055f-h Polymerization of esters of acrylic acid and tricyclo [5.2.1.02.6]dec-3-en-9-ol. (Badische Anilin- & Soda-Fabrik AG). NL 6512074 19660325, 6 pp. (Unavailable). PRIORITY: DE 19640924.

AB Copolymers of unsatd. polybutadienes and styrene, acrylates, and methacrylates have high curing temps. and are opaque. By using the usual polymn. initiators and promoters, copolymers of unsatd. polybutadiene and tricyclo[5.2.1.02.6]dec-3-en-9-ol (I) can be cured at room temp. to give **transparent** products. Thus, I is prepd. by dissolving 3 g. hydroquinone in 720 g. acrylic acid and adding 22 g. BF<sub>3</sub> with mixing. In 60 min., 660 g. dicyclopentadiene is added at 40°. The mixt. is kept at 60-70° for 4 h. The excess acrylic acid is removed by distn. in vacuum (8 mm. ) and the residue is dissolved in C<sub>5</sub>H<sub>12</sub> and washed 3 times with H<sub>2</sub>O. To remove the last traces of acid and catalyst, the soln. is washed with 10% Na<sub>2</sub>CO<sub>3</sub> soln. and 5% NaOH soln. The org. layer is distd. to remove C<sub>5</sub>H<sub>12</sub> and the residue is fractionated in vacuum after adding 2 g. phenothiazine. The yield is 883 g. I. The polymer is prepd. by mixing 4 g. polybutadiene (1,4-cross-linked, av. mol. wt. 1,200,000) with 96 g. I and 0.01 g. tert-butylcatechol until a homogeneous soln. is obtained. Then, 4 g. 50% suspension of cyclohexanone peroxide in di-Bu phthalate and 0.4 g. 10% soln. of Co naphthenate in styrene are added and the mixt. poured into test tubes. After 20 min. at room temp., a clear, colorless, cured, nonliquefiable polyester is obtained.

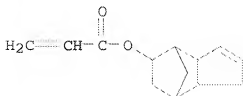
IT 1640-06-8, Acrylic acid, 3a,4,5,6,7,7a-hexahydro-4,7-methanoinden-5-yl ester

(graft polymn. of, with unsatd. butadiene polymers)

RN 1640-06-8 HCA

CN 2-Propenoic acid, 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5-yl

ester (9CI) (CA INDEX NAME)



IC C08F  
CC 45 (Synthetic High Polymers)  
IT 1640-06-8, Acrylic acid, 3a,4,5,6,7,7a-hexahydro-4,7-methanoinden-5-yl ester  
(graft polymn. of, with unsatd. butadiene polymers)

=> D L41 1-6 CBIB ABS HITSTR HITIND

L41 ANSWER 1 OF 6 HCA COPYRIGHT 2007 ACS on STN

135:293714 Hydrophobic polysiloxane block copolymers and cosmetics containing them. Miyazawa, Kazuyuki; Kaneda, Isamu; Hariki, Toshio (Shiseido Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001278981 A 20011010, 20 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-96948 20000331.

AB Cosmetics contain block copolymers comprising polysiloxane blocks CR2R3(CH2)pCOABSi(R1)2[OSi(R1)2]mOSi(R1)2BA or COYCOABSi(R1)2[OSi(R1)2]mOSi(R1)2BA [R1 = H, C1-6 alkyl, Ph; R2 = H, C1-6 alkyl; R3 = C1-6 alkyl, cyano; Y = dibasic acid residue; A = NH, O; B = (O-contg.) C1-6 alkylene; m = 1-10,000; p = 0-6] and hydrophobic blocks having bulky hydrophobic groups :CR5COEQ or :CR5COE(CH2)nJQ (R5 = H, C1-6 alkyl; E = NH, O; J = NH, O, CO2, CONH, NHC02; Q = cholesteryl, norbornyl, adamantyl, C6-12 cycloalkyl, vitamin D deriv. residue, ε-caprolactam residue, tertiary amino, etc.; n = 1-18). The copolymers promote percutaneous **absorption** of functional ingredients in cosmetics. A **transparent** lotion was prepd. from 1,3-butylene glycol 6, glycerin 4, oleyl alc. 0.1, polyoxyethylene sorbitan monolaurate 0.5, block copolymer [prepd. from poly[polydimethylsiloxane-4,4'-azobis(4-cyanopentanamidopropyl)], cholesteryl acrylate, cyclodecyl acrylate, cyclododecyl acrylate, N-isopropylacrylamide, and acrylamide] 0.5, EtOH 10, arbutin 2, additives, and H2O to 100 wt.%.  
IT 365276-28-4P 365276-34-2P 365276-35-3P  
365276-37-5P 365276-38-6P

(cosmetics contg. hydrophobic polysiloxane block copolymers as percutaneous **absorption** improvers)

RN 365276-28-4 HCA